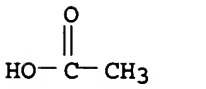
```
      (FILE 'HOME' ENTERED AT 17:09:00 ON 14 APR 2006)

      FILE 'CAPLUS, EMBASE, USPATFULL' ENTERED AT 17:09:15 ON 14 APR 2006
L1         23401 FILE CAPLUS
L2         22535 FILE EMBASE
L3         14043 FILE USPATFULL
      TOTAL FOR ALL FILES
L4         59979 S FIBRONECTIN
L5         22728 FILE CAPLUS
L6          4448 FILE EMBASE
L7         49056 FILE USPATFULL
      TOTAL FOR ALL FILES
L8         76232 S ALGINATE?
L9            32 FILE CAPLUS
L10            0 FILE EMBASE
L11          284 FILE USPATFULL
      TOTAL FOR ALL FILES
L12          316 S GLACIAL ACID

      FILE 'REGISTRY' ENTERED AT 17:10:06 ON 14 APR 2006
L13            0 S GLACIAL ACID/CN
L14            0 S GLACIAL ACID/CN
L15            0 S GLACIAL ACID
L16          149 S GLACIAL

      FILE 'CAPLUS, EMBASE, USPATFULL' ENTERED AT 17:11:44 ON 14 APR 2006
L17        94532 FILE CAPLUS
L18          615 FILE EMBASE
L19        50733 FILE USPATFULL
      TOTAL FOR ALL FILES
L20       145880 S GLACIAL ACETIC ACID OR 64-19-7/RN OR ACIOJEL OR ((ETHANOIC OR

      FILE 'REGISTRY' ENTERED AT 17:13:52 ON 14 APR 2006
L21            0 S ALGINATE/CN
L22          479 S ALGINATE
L23          437 S ALGINIC ACID
L24            1 S ALGINIC ACID/CN
L25          146 S ALGINIC ACID (3A) SODIUM

      FILE 'CAPLUS, EMBASE, USPATFULL' ENTERED AT 17:15:49 ON 14 APR 2006
L26        94708 FILE CAPLUS
L27          648 FILE EMBASE
L28        53374 FILE USPATFULL
      TOTAL FOR ALL FILES
L29       148730 S L4 AND (L8 OR (ALGINIC ACID)) OR L20
L30            6 FILE CAPLUS
L31            0 FILE EMBASE
L32          246 FILE USPATFULL
      TOTAL FOR ALL FILES
L33          252 S L4 AND (L8 OR (ALGINIC ACID)) AND L20
L34            4 FILE CAPLUS
L35            0 FILE EMBASE
L36          145 FILE USPATFULL
      TOTAL FOR ALL FILES
L37          149 S L33 AND WOUND
L38            1 FILE CAPLUS
L39            0 FILE EMBASE
L40            2 FILE USPATFULL
      TOTAL FOR ALL FILES
L41            3 S L4 (500A) (L8 OR (ALGINIC ACID)) (500A) L20
L42            1 FILE CAPLUS
L43            0 FILE EMBASE
L44            2 FILE USPATFULL
```

```
     TOTAL FOR ALL FILES
L45            3 S L4 (500A) (L8 OR (ALGINIC ACID)) (500A) (L20 OR ACETIC)
L46            7 FILE CAPLUS
L47            0 FILE EMBASE
L48           85 FILE USPATFULL
     TOTAL FOR ALL FILES
L49           92 S L4 AND (L8 OR (ALGINIC ACID)) (500A) (L20 OR ACETIC)
L50            7 FILE CAPLUS
L51            0 FILE EMBASE
L52           72 FILE USPATFULL
     TOTAL FOR ALL FILES
L53           79 S L4 AND (L8 OR (ALGINIC ACID)) (50A) (L20 OR ACETIC)
L54            0 FILE CAPLUS
L55            0 FILE EMBASE
L56            3 FILE USPATFULL
     TOTAL FOR ALL FILES
L57            3 S L53 AND FIBRONECTIN/CLM

=> save all
ENTER NAME OR (END):l10049992/l
L# LIST L1-L57 HAS BEEN SAVED AS 'L10049992/L'

=>
```

L16 ANSWER 149 OF 149 REGISTRY COPYRIGHT 2006 ACS on STN
RN 64-19-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Aci-Jel
CN E 260
CN Ethanoic acid
CN Ethanoic acid monomer
CN Ethylic acid
CN **Glacial acetic acid**
CN Methanecarboxylic acid
CN NSC 111201
CN NSC 112209
CN NSC 115870
CN NSC 127175
CN NSC 132953
CN NSC 406306
CN Vinegar acid
FS 3D CONCORD
DR 77671-22-8
MF C2 H4 O2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DDFU, DETHERM*, DIOGENES, DIPPR*, DRUGU, EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, TULSA, ULIDAT, USAN, USPAT2, USPATFULL, VETU, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

96004 REFERENCES IN FILE CA (1907 TO DATE)
4986 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
96240 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=>

L24 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2006 ACS on STN
RN   9005-32-7 REGISTRY
ED   Entered STN: 16 Nov 1984
CN   **Alginic acid (8CI, 9CI)** (CA INDEX NAME)
OTHER NAMES:
CN   A 2830-9
CN   Acid Algin G 2
CN   Alginate 8
CN   Alginate LV
CN   Cecalgum S 500
CN   Duckacid X 2787
CN   E 400
CN   Grindsted PH 060
CN   Kelacid
CN   Kimika Acid G
CN   Lamitex LV
CN   Landalgine
CN   Norgine
CN   Protanal LF
CN   Satialgine
CN   Satialgine H 8
CN   Snow acid algin G
CN   Verdyol Super
DR   545434-56-8, 210888-24-7
MF   Unspecified
CI   PMS, COM, MAN
PCT Manual registration, Polyester, Polyester formed
LC   STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CBNB, CHEMCATS, CHEMLIST, CHEMSAFE, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, HSDB*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9793 REFERENCES IN FILE CA (1907 TO DATE)
1916 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
9835 REFERENCES IN FILE CAPLUS (1907 TO DATE)

=>

LE FOR THIS PATENT.

L53 ANSWER 73 OF 79 USPATFULL on STN

SUMM Further, as to the use of materials having undesirable defined cell binding properties, heparin is also not preferred to be linked to alginate in the composition due to its well known inhibition of the blood clotting mechanism. Heparan sulfate is also not preferred on the basis of its participation in cell-cell adhesion mechanisms. Heparan sulfate is linked to a membrane-bound proteoglycan that binds NCAM (neural cell adhesion molecule), thereby promoting homophilic cell adhesion(Cole et al, 1986). The heparan sulfate binding domain of **fibronectin** is responsible for the binding of neurons, lymphocytes and other cell types to **fibronectin**, in the process of cell-cell adhesion (Liao etal, 1988). Further, heparan sulfate proteoglycans found on cell surfaces and in the extracellular matrix are binding sites for the basic fibroblast growth factor(bFGF) (Moscatelli et al, 1988).

DETD Alcian Blue is a well known stain for chondroitin sulfate (Turnbull, 1993); we found that it also stains **alginate**, although with less intensity. Microcapsules were stained in 0.5% Alcian Blue in 2% **acetic** acid, for 20 min; de-staining was in 2% **acetic** acid, in repeated washings. Biodritin microcapsules give a deeper blue than **alginate** capsules, as expected. When Biodritin microcapsules prepared as in Example 8, are cut in half and stained, the interior of the capsules stains more intensively than the outside, indicating that the external membrane has an effect on the stain diffusion to the capsule interior.

DETD 6. Liao, N-S., St.John, J., McCarthy, J. B. and Furcht, L. T. and Cheung, H. T. (1988) Adhesion of Lymphoid Cells to the Carboxyl-terminal Heparin-binding Domains of **Fibronectin**. Exp. Cell Res. 181, 348-361.

ACCESSION NUMBER: 2001:142474 USPATFULL
TITLE: Hetero-polysaccharide conjugate and methods of making and using the same
INVENTOR(S): Mares-Guia, Marcos, Miami Beach, FL, United States
Ricordi, Camillo, Miami Beach, FL, United States
PATENT ASSIGNEE(S): Biomm, Inc. & University of Miami, Miami, FL, United States (U.S. corporation)

	NUMBER	KIND	DATE	
PATENT INFORMATION:	US 6281341	B1	20010828	
APPLICATION INFO.:	US 1997-877682		19970617	(8)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-45111P	19970430 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Fonda, Kathleen K.
LEGAL REPRESENTATIVE: Frommer Lawrence & Haug, Pan, Grace L.
NUMBER OF CLAIMS: 62
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 5 Drawing Page(s)
LINE COUNT: 1525
CAS INDEXING IS AVAILABLE FOR THIS PATENT.